



founded in
2003

KAL - Large IP Cores:

VIP cores:

- PCIe, USB, AMBA
- SD/SDIO, eMMC
- UniPro, I3C, Soundwire
- DDR 2/3/4, LPDDR, ONFI, SATA
- HDMI
- CAN, CANFD, FLexRay
- SPI, I2C, SMBus

Military/Aerospace

- 1553

Multimedia

- H.264
- JPEG

Automotive:

- CAN/CAN-FD
- FlexCAN
- FlexRay
- Lin

AHB/APB Peripherals:

- AHB/AXI/APB bridges
- Inter Connect complete IP

Memory Controllers:

- SD/SDIO Controller
- SDRAM Controller
- DDR / SDRAM Controller
- NAND Flash Controller
- Flash/EEPROM/SRAM Controller
- PCMCIA/CompactFlash Host Adapter
- PCMCIA/CompactFlash Slave Controller

CPU Cores:

Comparison of Extracted Netlists with Silvaco!

Belledonne has been designed to compare large extracted netlists in order to quickly find differences. Belledonne can very quickly determine if two extracted netlists correspond using statistics and sophisticated analysis of the parasitics without running long-lasting circuit simulation.

Belledonne is a quality tool. In addition to tasks in the design flow, it can be used to compare different settings of a layout parasitics extraction tool, different versions of the same extraction tool, different formats or even compare different layout extraction tools. The tool is also useful to optimize the settings of LPE flows without completely understanding the extraction algorithms.

1. Determine accurately the impact on insertion delay due to manual changes in the routing without running long lasting Spice simulation or static timing analysis.

2. Determine the change in capacitive load on all wires moving from one technology to the next.

3. Compare the results of two different parasitic extraction tools applied on the same layout in order to tune their parameters.

4. Make sure that a later version of a layout still complies with electrical rules related to the interconnects.

- Statistics
- Effective resistance between pins
- Effective RC-delay between pins
- Capacitive load on nets

Belledonne is available as a batch-processing tool and with a graphical interface (GUI). The GUI allows to show different types of statistics: histograms or scattering plots.

Belledonne can export results in TSV/CSV file formats.

Example Applications Methodology

- 32 bit – ColdFire V4
- 8 bit - 8051
- 8 bit- HC68HC11
- 8 bit - PIC Processor
- 8 bit – Z80
- 16 bit – D6800

- 2 extracted netlists, generated by Star RCXT, Assura QRC/Quantus, Calibre XRC or other
- Formats: DSPF, SPEF, CalibreView, Spice, Spectre
- Belledonne can compare cross-formats

Output

- GUI based scattering plots or histograms showing differences between the two netlists
- ASCII result files (CSV / TSV)

Clock Synchronization:

- IEEE 1588 Slave
- IEEE 1588 Master
- IEEE 1588Master/Salve
- IEEE 1588 PTP Stack
- IEEE 1588 L2/L3 Solution

KAL is representing Silvaco in Israel.

www.KALtech.co.il

Peripherals:

- HDLC/SDLC
- Smart Card Reader Unit
- EEPROM SPI Ctrl
- LCD Ctrl
- Floating Point Unit
- I2C/I3C Master/Slave
- SPI Master/Slave
- CAN/CAN FD bus
- LIN bus
- Programmable Peripheral Interface
- UART, UART with FIFO
- PWM
- Timer 8254
- Programmable Timer
- Interrupt Controller
- Ethernet Controller 10/100/1000 BaseT
- DMA Controller
- USB 1.0/2.0 Host/Salve
- On Chip Bus Analyzer

We are looking forward to hear from you.

Contact us for more information.

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Until the next eNews,

Thanks you for your attention.

KAL

PCI Bus Controllers and Peripherals:

- PCI Express
- PCI-X Host Bridge Master/Target
- PCI Host Bridge Master/Target
- PCI-PCI Bridge

- **PCI-ISA Bridge**
- **PCI Bus Arbiter**

Modulation:

- **ADPSM**

Analog IP Cores:

- **Analog IP cores (ADC, DAC, PLL,) are available – Please contact us.**
- **We are expert in custom analog IP**

[Contact us for data sheet](#)